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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,752	01/22/2004	Kevin James Cherkauer	BEA9-2003-0019US1	7696

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EXAMINER

LEWIS, CHERYL RENEA

ART UNIT	PAPER NUMBER
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2167

MAIL DATE	DELIVERY MODE
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05/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/763,752

Applicant(s)

CHERKAUER ET AL.

Examiner

Cheryl Lewis

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to the applicants' communication received on February 13, 2007.
2. Claims 1-20 are presented for examination.
3. The applicants have not amended any claims nor have any claims been cancelled.
4. Applicants' arguments with respect to claims 1-20 have been considered but are deemed to be moot in view of the new grounds of rejection.

Allowable Subject Matter

5. Claims 1-6 are allowed.

Claim Objections

6. Claim 7 is objected to because of the following informalities:

Claim 7 is objected to because the claim does not produce a tangible result. At step (c) of claim 7, the claim recites, "re-ordering said extents lists based on an order calculated to be more efficient for execution of said plurality of queries". Step "c" does not conclude with a result of what happens to the re-ordering of an extents lists based on an order calculated for execution of a plurality of queries.

The Examiner kindly requests the applicants to compare independent claim 1 to independent claim 7. In this comparison, claim 7 is missing the following

claim limitations of claim 1 that would produce a tangible result for the "re-ordering" step:

(1) retrieving said extents from said memory devices as ordered in said extents lists;

(2) storing said extents that are retrieved in said buffer cache; and

(3) executing said queries on said particular said data in respective said extents stored in said buffer cache to determine respective results

After careful consideration of claim 7 and based on the above comparison of steps 1-3 of claim 1 to claim 7, these steps would produce the tangible results needed after the "re-ordering" step of claim 7.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Das et al. (Patent No. 6,470,330 B1 filed November 2, 1999, hereinafter Das).

9. Regarding Claim 7, Das teaches a database system with methods for estimation and usage of index page cluster ratio (ipcr) and data page cluster ratio (dpcr).

The method and associated system for a database system with methods for estimation and usage of index page cluster ratio (ipcr) and data page cluster ratio (dpcr) as taught or suggested by Das includes:

receiving a plurality of queries with respect to data (col. 2, lines 31-36, 'The present invention comprises a database system with improved query execution performance.') in at least one of a plurality of tables in a database (col. 5, line 54, '...more database tables 250...'), wherein each table occupies at least one extent (col. 2, lines 39-47, '...pages of a given relational table are in a fixed group of pages called "extents."'); reviewing each query and determining a respective extents lists of extents containing a data (col. 8, lines 57-67, col. 9, lines 1-10, 'Consider FIG. 3 illustrating a table with twelve data rows (R1-R12), five (data pages DP1-3 of extent E1 and DP1-2 of extent E2...) needed by the query (col. 7, lines 64-67, col. 8, lines 1-30) ; and re-ordering extents lists (col. 9, lines 11-46, '...ordering and density of data pates in extents with respect to the other of the page chain.') based on an order calculated (col. 9, lines 11-60, '...index page cluster ratio...') to be more efficient for execution of a plurality of queries (col. 9, lines 11-46).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 8-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Das et al. (Patent No. 6,470,330 B1 filed November 2, 1999, hereinafter Das) and Schiefer et al. (Patent No. 5,758,146 filed May 12, 1995, hereinafter Schiefer).

12. Regarding Claims 8, 14, and 20, the limitations of these claims have been noted in the rejection of claim 7 presented above. In addition, Das teaches loading extents from database as ordered in extents lists (col. 2, lines 31-47 and col. 8, lines 57-67). However, Das does not expressly teach a buffer cache and the buffer cache to determine respective results of executed queries.

Schiefer teaches a buffer cache (Abstract, line 9-11) and the buffer cache to determine respective results of executed queries (col. 6, lines 23-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cluster of data pages of Das' method with the stored database table having a plurality of pages of Schiefer's method because Schiefer's method could enable the cluster of data pages to comprise a buffer pool, wherein the buffer pool is a portion of memory that provides for the caching of data pages from tables of the database.

13. Regarding Claims 9-13 and 15-19, although the wording of the claim limitations for dependent claims 9-13 and 15-19 are similar to the wording of claim limitations presented in independent claims 7, 8, 14, and 20, the limitations of these claims have been noted in the rejections presented above. They are therefore rejected as set forth above.

NAME OF CONTACT

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Lewis whose telephone number is (571) 272-4113. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

(571) 273-4113 (Use this FAX #, only after approval by Examiner, for "INFORMAL" or "DRAFT" communication. Examiners may request that a formal paper/amendment be faxed directly to them on occasions.).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/ Technology Center (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cheryl Lewis/
Patent Examiner, A.U. 2167
May 22, 2007